

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-4. (canceled)

5. (currently amended) An oxidation method of a semiconductor substrate having an STI region, ~~in which a trench is formed in a semiconductor region by etching and an insulator is filled into the trench, the method~~ comprising the steps of:

etching a semiconductor region to form a trench;

preparing dichloroethylene (DCE); and

subjecting an inside of the trench to halogen oxidation with the dichloroethylene and oxygen, whereby a thickness of an oxide film at a corner portion of the semiconductor region adjacent to an ~~opening~~ open upper end portion of the trench is ~~made~~ greater than a thickness of ~~the other~~ said oxide film at other portions of [[in]] the trench, the halogen oxidation being carried out at a temperature between 850 and 950°C in an atmosphere within a furnace.

6-10. (canceled)

11. (new) An oxidation method of oxidizing an inner wall of a trench formed in a semiconductor region of a semiconductor substrate, the method comprising the steps of:

preparing dichloroethylene (DCE); and

carrying out halogen oxidation of the inner wall of the trench using the DCE and oxygen,

the halogen oxidation being carried out at a temperature between 850 and 950°C in an atmosphere within a furnace.

12. (new) The oxidation method as claimed in claim 11, wherein the halogen oxidation is carried out by bubbling the DCE with nitrogen to vaporize the DCE to be introduced into the furnace together with the oxygen and by controlling a content of the DCE introduced into the furnace;

the content of the DCE in the furnace being determined by the oxygen introduced into the furnace and the nitrogen used for bubbling the DCE by controlling a flow rate of the oxygen to a flow rate of the nitrogen.

13. (new) The oxidation method as claimed in claim 12, wherein a proportion of the flow rate of the oxygen to the flow rate of the nitrogen falling by weight % within a range between 0.45% and 1.97%.